

Baton Rouge Community College

Academic Affairs Master Syllabus

Date Approved or Revised: July 23, 2008

Course Name: Biology I for Science Majors

Course Number: BIOL 120

Lecture Hrs. 3

Lab Hrs. 0

Credit Hrs. 3

Course Description: Covers general concepts in cellular structure, cellular metabolism, cellular communication, and genetics.

Prerequisites: CORE 081 and COPA 048 or A0218 or Math 094 with a grade of C or better

Co-requisites: BIOL 120L

Suggested Enrollment Cap: 40

Learning Outcomes: Upon successful completion of this course, the student will be able to:

- Demonstrate a detailed knowledge of general biology concepts in the areas of evolution, genetics; molecular biology; biotechnology; general and bio-chemistry; cell structure and function that provides a foundation for future intellectual growth in the science/health fields;
- Analyze, synthesize, evaluate, and apply the general biological concepts to their own life, to the natural world, and to society;
- Use computer technology to access, retrieve, process, organize, and communicate data and information relevant to general biological concepts;
- Use standard English and appropriate citation of outside resources to effectively communicate basic biological literacy; and
- Interpret biological images, scientific graphs and models used to illustrate general biology concepts.

General Education Learning Outcomes: This course supports the development of competency in the following areas. Students will:

- Think critically, collect evidence (statistics, examples, testimony) and make decisions based on the evidence, comprehend and analyze texts, and solve problems using methods of critical and scientific inquiry;
- Communicate effectively using standard written English;
- Relate the general concepts of science to the world and demonstrate an understanding of the impact of these processes and their concepts on human lives; and
- Use computer technology to access, retrieve, process, and communicate information.

Assessment Measures: Assessment of all learning outcomes will be measured using the following methods:

- Individual instructor-designed exams will collectively assess a portion of the learning outcomes and will be administered during the semester as listed in the course syllabus;
- An instructor-designed comprehensive final exam, adhering to a departmental-determined common content, will assess a portion of the learning outcomes and will be given at the end of the semester; and
- Individual instructor-designed or collaborative instructor-designed assignments will assess a portion of the learning outcomes and will be given as a portion of the total grade. Assignments will include oral and written assignments, projects, homework, and quizzes; all assignments will be graded using an instructor-designed rubric.

Information to be included on the Instructors' Course Syllabi:

- **Disability Statement:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
- **Grading:** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor's and/or the department's policy for make-up work. For example in a speech course, "Speeches not given on due date will receive no grade higher than a sixty" or "Make-up work will not be accepted after the last day of class."
- **Attendance Policy:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
- **General Policies:** Instructors' policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
- **Cheating and Plagiarism:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
- **Safety Concerns:** In some programs this may be a major issue. For example, "No student will be allowed in the safety lab without safety glasses." General statements such as, "Items that may be harmful to one's self or others should not be brought to class."
- **Library/ Learning Resources:** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

Expanded Course Outline:

I. The Cell

- A. Basic Chemistry
- B. The Chemistry of Organic Molecules
- C. Cell Structure and Function
- D. Membrane Structure and Function
- E. Metabolism: Energy and Enzymes
- F. Photosynthesis
- G. Cellular Respiration
- H. Cellular Reproduction and the Cell Cycle

II. Genetic Basis of Life

- A. Meiosis and Sexual Reproduction
- B. Mendelian Patterns of Inheritance
- C. Chromosomes and Genes
- D. Human Genetics
- E. DNA Structure and Function
- F. Gene Activity: How Genes Work
- G. Genome Organization and Regulation of Gene Activity
- H. Biotechnology

III. Evolution

- A. Darwin and Evolution
- B. Process of Evolution
- C. Origin and History of Life
- D. Human Evolution